

SYSTEMS AND METHODS FOR
MONITORING CREDIT OF TRADING COUNTERPARTIES

Cross Reference to Related Application

This application claims the benefit of United
5 States Provisional Patent Application No. 60/174/896,
filed January 6, 2000, which is hereby incorporated by
reference herein in its entirety.

Background of the Invention

The present invention relates to systems and
10 methods for monitoring credit of trading
counterparties. More particularly, the present
invention relates to systems and methods for monitoring
credit of trading counterparties that enable trading
systems and credit managers to monitor credit of
15 trading counterparties and thereby control the risk
that the trading system and the trading counterparties
are exposed to.

In recent years, electronic trading systems
have gained wide spread acceptance for trading of a
20 wide variety of items, such as goods, services,
financial instruments, and commodities. For example,
electronic trading systems have been created which
facilitate the trading of financial instruments and
commodities such as stocks, bonds, currency, futures,
25 oil, gold, pork bellies, etc. As another example,

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online auctions on the Internet have become popular markets for the exchange of services and both new and used goods.

Trading systems are frequently operated by
5 individual traders in order to effect trades for legal
entities with which they are employed. For example, a
bank may employ various traders who participate in
trading in the bond market. In trading system, both
the traders and the banks may each maintain a trading
10 account, and thus each is a counterparty in the trading
systems. Similarly, a holding company may own several
banks, and each bank may employ several traders. As
above, the holding company may also maintain a trading
account, and thus the holding company is also a
15 counterparty in the trading system. The accounts that
are held may follow the same type of structural
hierarchy. For example, the holding company may have a
trading account, each bank may have a sub-account of
the holding company's account, and each trader may have
20 a sub-account of their bank's account. In the context
of this invention, a customer of a trading system may
be any person or entity holding one or more trading
accounts and may be also referred to as a counterparty.
For example, the holding company may hold its own
25 account as well as the accounts of its banks, and each
bank may hold its own account as well as the accounts
of its traders. Also in the context of this invention,
the holding company is the parent entity of the banks
and the banks are the parent entities of their traders.

30 Many of these electronic trading systems use
a bid/offer process in which bids and offers are
submitted to the systems by a passive side and then
those bids and offers are hit and lifted (or taken) by
an aggressive side. For example, a passive trading

parent

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counterparty may submit a "bid" to buy a particular number of 30 Year U.S. Treasury bonds at a given price. In response to such a bid, an aggressive side counterparty may submit a "hit" in order to indicate a willingness to sell bonds to the first counterparty at the given price. Alternatively, a passive side counterparty may submit an "offer" to sell the particular number of the bonds at the given price, and then an aggressive side counterparty may submit a "lift" (or "take") in response to the offer to indicate a willingness to buy bonds from the passive side counterparty at the given price.

When trades are entered into by one counterparty submitting a bid or offer and another counterparty hitting or lifting the bid or offer, respectively, a binding contract between the counterparties is entered into. Part of that contract requires that the counterparties each deliver money, goods, and/or services. For example, if a first counterparty bids to buy \$100 million in 30 year U.S. Treasury bonds, and a second counterparty hits the bid, the first counterparty has to deliver \$100 million in cash and the second counterparty has to deliver the 30 year U.S. Treasury bonds within a predetermined clearing time. This process is referred to as a trade clearing.

Because counterparties have the potential to lose money when trades do not clear because of subsequent changes in market conditions, counterparties frequently desire to, and are frequently required by their parent entities to, limit their risk exposure.

A One way in which risk exposure can be limited is to place a monetary limit on the amount of trades that can be made in one day. This limit is referred to as a

credit limit. The monetary total amount of trades that may be made is referred to as the credit available to the counterparty, and the monetary total amount of trades that have been entered into so far is referred to as the position of the counterparty.

Accordingly, it is an object of the present invention to provide systems and methods for monitoring credit of trading counterparties.

Summary of the Invention

10 In accordance with this and other objects of the invention, systems and methods for monitoring credit of trading counterparties are provided. More particularly, the present invention is systems and methods for monitoring credit of trading counterparties
15 that enable trading systems and credit managers to monitor credit of trading counterparties and thereby control the risk that the trading system and the trading participant are exposed to. In one aspect of the present invention, the systems and methods monitor
20 trades entered into and cleared by counterparties, track the net and gross positions of counterparties and the counterparties' parent entities, trigger warnings when counterparties or their parent entities exceed a warning limit, and shut-off counterparties' trading
25 ability when counterparties exceed a credit limit. In another aspect of the present invention, an operator of a credit system is provided with a variety of interfaces through which the operator can set up new counterparties, search a list of counterparties, view
30 and edit basic information for counterparties, view financial information for counterparties, view and edit notes regarding counterparties, view and edit limits of counterparties, view position versus limit information

for counterparties, view the current day's position information for counterparties, and view cumulative position information for counterparties.

Brief Description of the Drawings

5 Further features of the invention, its nature and various advantages will become more apparent from the following detailed description of the invention, taken in conjunction with the accompanying drawings, in which like reference characters refer to like parts
10 throughout, and in which:

FIG. 1 is a block diagram of hardware that may be used to implement various embodiments of the present invention;

15 FIG. 2 is a flow diagram of a credit monitoring process in accordance with various embodiments of the present invention;

FIG. 3 is an illustration of a main menu that may be presented in accordance with various embodiments of the present invention; and

20 FIGS. 4-21 are illustrations of various credit processor operator interfaces that may be presented in accordance with various embodiments of the present invention.

Detailed Description of the Invention

25 The present invention is now described in connection with FIGS. 1-21. Turning first to FIG. 1, an example of hardware 100 that may be used to implement one embodiment of the present invention is shown. As illustrated, hardware 100 may include one or
30 more local workstations 102 and one or more remote workstations 104 that may be used by counterparties to view trading data and enter trading commands.

Workstations 102 and 104 may be any suitable means for presenting data and, in preferred embodiments of this invention, accepting input. For example, workstations 102 and 104 may be personal computers, laptop
5 computers, mainframe computers, dumb terminals, data displays, Internet browsers, Personal Digital Assistants (PDAs), two-way pagers, wireless terminals, portable telephones, etc., or any combination of the same.

10 To orchestrate trading between counterparties using workstations 102 and 104, the workstations preferably submit commands to, and receive data to be displayed from, a processor 106. In alternative
15 embodiments, however, workstations may communicate with additional processors, or include processors to orchestrate trading in a distributed fashion without requiring processor 106. In yet other embodiments, processor 106 may be connected to an external trading
20 system (not shown) that controls trading by the counterparties. Processor 106, and any additional processors, may be any suitable circuitry or devices capable of processing data such as microprocessors, personal computers, network servers, mainframe
computers, dedicated computer systems, etc.

25 As shown, processor 106 may be connected to workstations 102 and 104 by networks 108 and 110, respectively. Each of networks 108 and 110 may be any suitable data network for communicating data between
workstations 102 and 104 and processor 106, such as a
30 local area network, a wide area network, the Internet, an intranet, a wireless network, a hard wired connection, a dial-up network, etc., or any combination of the same. In an arrangement of hardware 100 without

processor 106, workstations 102 and 104 may be linked together by networks 108 and 110 directly.

Workstations 102 and 104, processor 106, and networks 108 and 110 may collectively form a trading
5 system.

As also shown in FIG. 1, a telephone network 126 may be provided that comprises a local telephone 128 and a remote telephone 130 connected by a telephone line 132. Telephone network 126 may be used
10 to enable a counterparty at a remote location to communicate with a broker-counterparty at a workstation 102 or 104. This may be useful when the counterparty does not have access to a workstation 102 or 104 or when the counterparty only has access to a display-only
15 workstation 102 or 104. Obviously, telephone network 126 may be implemented as a private telephone network, a public telephone network, a wireless telephone network, or any suitable combination of the same.

When used to implement a bid/offer, hit/take
20 trading system as described above or connect to an external bid/offer, hit/take trading system, hardware 100 may enable a counterparty to submit a bid to buy, or an offer to sell, an item at one of workstations 102 and 104. This bid or offer may then be communicated to
25 processor 106, where the bid or offer can be ranked and stored in a bid-offer queue. The ranking may be based upon time of submission, price, or any other suitable criterion. The bid or offer may then be presented to other counterparty via other workstations 102 and 104
30 dependent upon its ranking in the bid-offer queue. Once displayed, the bid or offer can then be hit or taken by one or more of the other counterparty so that a trade of the item can proceed to execution.

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FIG. 1

A back office clearing system 112 and a credit processor 114 may also be connected to processor 106 of the trading system via communication links 118 and 120, respectively. Clearing system 112 may be any suitable equipment, such as a computer, or combination of the same, for causing trades to be cleared and/or verifying that trades are cleared. Credit processor 114 may be any suitable equipment, such as a computer, or combination of the same, for monitoring and controlling credit as described hereinbelow. Credit processor 116 may be controlled by one or more operator terminals 116 via communication link 124, and/or by workstations 102 and 104 via networks 108 and 110 and processor 106. Operator terminals 116 may be any suitable circuitry or devices capable of providing a control interface for credit processor 114 such as microprocessors, personal computers, network servers, mainframe computers, dedicated computer systems, dumb terminals, computer monitor and keyboard, etc. Clearing system 112 may communicate with credit processor 114 via communication link 122, and communication links 118, 120, 122, and 124 may be any suitable data network for communicating data, such as a local area network, a wide area network, the Internet, an intranet, a wireless network, a hard wired connection, a dial-up network, etc., or any combination of the same.

Turning to FIG. 2, an example of a process 200 that may be executed in credit processor 114 is illustrated. As shown, at steps 202 and 204, trade information may be received from processor 106 of the trading system and back office clearing system 112. The trade information from processor 106 may include the price, size, and item to be traded in connection

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necessary. Next, at step 214, process 200 may adjust the LBE short and long positions for each counterparty account corresponding to the received information, if necessary. Where a trade has cleared, for example, the counterparty account may be deducted by the amount of the trade to reflect that the trade is no longer "on credit." Next at step 216, process 200 may adjust the LBE short and long positions for all accounts of each parent entity having counterparties corresponding to the received information, if necessary.

Upon completing step 210 or step 216, process 200 may next determine at step 218 whether the counterparty accounts corresponding to the information have credit limits. For each account having a credit limit, process 200 may next check the account position against its account limit at step 220. The account's position is preferably the value accumulated at steps 208 and 214. Next, at step 222, process 200 determines if the account's position is within the warning level range for the account. The warning level range is a range in which a counterparty, credit manager, trading system administrator, or anyone or anything else may be warned that the account is approaching its limit. If the account's position is not within the warning level range, then process 200 determines if the account's position is over its credit limit at step 224. If the account's position is not over its credit limit, then process 200 proceeds to step 226 to wait for more information from processor 106 or clearing system 112. Otherwise, if the account position is over its credit limit, process 200 may shut off the account at step 228. Finally, after shutting off the account at step 228, or if the account is determined to be within the warning level range at step 222, process 200 may send a

5 If process 200 determines at step 218 that
the account does not have a credit limit, however, then
process 200 proceeds to step 232 where it determines
whether the parent entity having the counterparty
corresponding to the account has a credit limit. This
10 limit would encompass an account limit for the account
if one existed. If process 200 determines at step 232
that the parent entity does not have a credit limit,
then process 200 may shut off the parent entity and all
of its counterparties by disabling their trading
15 accounts at step 234. After shutting off these
accounts at step 234, process 200 may send a message,
at step 230, to one or more pagers of designated
persons with information relating to the accounts, such
as account numbers, positions, and limits, and then
20 wait for more trade information at step 226.

If process 200 determines at step 232 that the parent entity does have a credit limit, however, process 200 may then check the parent entity's position against its credit limit at step 236. The parent entity's position is preferably the value accumulated at steps 210 and 216. Next, at step 238, process 200 may determine whether the parent entity's position is within the warning level range for that entity. If the parent entity's position is within the warning level range, then process 200 may send a message, at step 240, to one or more pagers of designated persons with information relating to the parent entity, such as counterparty number, position, and limit, and then wait for more trade information at step 226.

If process 200 determines at step 238 that the parent entity's position is not within the warning level range, then process 200 may determine at step 242 whether the parent entity's position is over the parent
5 entity's credit limit. If the parent entity's position is over its credit limit, then process 200 may shut off the parent entity and all of its counterparties by disabling their trading accounts at step 234 and send a message to one or more pagers of designated persons
10 with information relating to the accounts, such as account numbers, positions, and limits, at step 230. After sending a message at step 230, of if process 200 determines at step 242 that the parent entity's position is not over its credit limit, process 200 may
15 wait for more trade information at step 226.

Turning to FIGS. 3-21, examples of user interfaces that may be presented to an operator of credit processor 114 via operator terminal 116 and/or workstations 102 and/or 104 are illustrated. As shown
20 in FIG. 3, a main menu 300 is illustrated. Main menu 300 is illustrated with icons 301-311 which are supplemented by text, although main menu may be implemented in any suitable manner. Main menu 300 allows an operator to enter information for a new
25 counterparty, search a list of counterparties, view and edit basic information for counterparties, view and edit financial information for counterparties, view and edit notes regarding to counterparties, view and edit a limits of counterparties, view position versus limit
30 information for counterparties, view the current day's position information for counterparties, and view cumulative position information for counterparties by selecting icons 301, 302, 303, 304, 306, 307, 308, 309, and 310, respectively. Although the interfaces that

5 As mentioned above, by selecting icon 301
from menu 300, an operator can enter information for a
new counterparty. As used herein, the term
counterparty may be used to define any holder of a
trading account irrespective of whether that account
10 has sub-accounts or is a sub-account of another
account. Turning to FIG. 4, an interface 400 that may
be used to edit basic information for a counterparty is
illustrated. As shown, interface 400 includes
information areas 402, 404, 406, 408, and 410, and
15 buttons 412, 414, 416, 418, and 420.

Within basic information area 402, an operator may view a counterparty identification number 422 (which is preferably selected by credit processor 112), view and select a credit status 424 (which may include frozen, active, closed, open and pending), view and enter a counter party name 426, view and enter a short name 428, view and enter a date that the counterparty was formed 430, view and select a country code for the counterparty 432, view and enter a tax identification number 434 for the counterparty, view and enter the number of branches 436 operated by the counterparty, view and select whether the counterparty is a parent entity or not 438, view and edit whether the counterparty has a parent entity 440 and, if so, view and select the name of the parent entity 442, and view the last date the information for the counterparty was modified 444 and the name of the operator that last modified the information 446.

If a parent entity is selected in box 440 and identified in field 442, information for that parent entity may appear in parent information area 406. As shown, this information may include an identification number 448, an entity classification 450, a name 452, a state 454, a country 456, and a geographical region 458.

In order to enter contact information like that displayed in contact information area 404 of interface 400, an operator may click on contact button 414. Upon clicking on button 414, an interface 500 as illustrated in FIG. 5 may be presented. As shown, the operator may view and edit the contact's first name, middle initial, last name, gender, department, title, telephone number, and position in fields 502, 504, 506, 508, 510, 512, 514, and 516, respectively. The operator may also view the identification number 518 for the contact, which is preferably assigned by the credit processor, the name 520 of the operator that last modified the information for the contract, and the date and time 522 that the information for the contact was last modified. The operator may save the information for a contact by clicking save button 524. The operator may also disassociate a contact with a counterparty and delete the contact by pressing delete button 526. Finally, when an operator is done using interface 400, the operator may close the interface by clicking on close button 528.

Although not illustrated in a figure, an operator may use a similar interface to interface 500 to enter and edit the address information that is displayed in address information area 408 for a counterparty by initially clicking on address button 416 in interface 400.

In order to enter and edit the description information that is displayed in description information area 410, an operator may click on descriptor button 418. Upon clicking on this button, the operator may be presented with an interface 600 as illustrated in FIG. 6. Within area 602 of interface 600, the operator may then select a descriptor type 604 that the operator wants to identify by clicking on the descriptor type. As shown, descriptor types may include classification, trading philosophy, structure of firm, main product, and membership. Once the operator has selected the descriptor type 604, a menu 606 of descriptors for that descriptor type may then be presented. For example, if the operator selects the membership descriptor type, menu 606 may include descriptors: NASD, MSRV, NYSE, ASE, CBOT, CME, AMEX, and LIFFE. If the operator selects the classification descriptor type, menu 606 may include descriptors: dealer, muni-dealer, broker-dealer, and customer. If the operator selects the trading philosophy descriptor type, menu 606 may include descriptors hedge fund and commercial bank. If the operator selects the structure-of-firm descriptor type, menu 606 may include descriptors: corporation, general partnership, chapter-S corporation, and limited liability partnership. If the operator selects the main product descriptor type, menu 606 may include descriptors: bonds, FX, IRO/IRS, and Repos. Obviously, certain descriptor types (which may be indicated by special coloring or in any other suitable manner), such as membership, may permit multiple descriptors to be selected, and others may only permit one descriptor to be selected. Multiple descriptor types may be defined for each counterparty.

When descriptor(s) 606 are selected for a descriptor type 604, the selections may then be displayed in a list of current descriptors area 608. In order to enable an operator to change the list of current descriptors, the operator may highlight a descriptor type and descriptor in list 608, and click remove button 610 or clear button 612. Remove button 610 preferably removes the descriptor type and descriptor from the list entirely, and clear button 612 preferably allows the operator to reenter the selections in area 602. Once the operator is done with interface 600, the operator may click on save button 614 to save the selections and/or close button 616 to close interface 600.

After an operator has completed using interface 400, the operator may click on save button 412 to save the selections and/or close button 420 to close interface 400.

In order to search for and view counterparty information that has already been entered, an operator may click on search list icon 302 in main menu 300. After clicking on icon 302, select counterparty interfaces 700 and 800 may be presented as illustrated in FIGS. 7 and 8. As shown in FIG. 7, select counterparty interface 700 is shown with a counterparty list view option 702 selected. When in this view, counterparty information is displayed in a region 704 of the interface. This information may include an identification number 726, a name 728, a classification 730, a credit status 732, a state 734, a country 736, a geographic region 738, a type 740 (e.g., parent or legal entity), a country code 742, and a parent name 744 for the counterparty. Parent counterparties may be

displayed in one color while non-parent counterparties may be displayed in another color.

The operator may scroll the list of information using scroll bar 746. The operator may
5 also sort the information in the list by identification number 726, name 728, classification 730, credit status 732, state 734, country 736, geographic region 738, type 740, country code 742, and parent name 744 by selecting headings 706, 708, 710, 712, 714, 716, 718,
10 720, 722, and 724, respectively. Repeatedly selecting the same heading may toggle the order of the sort from ascending to descending and vice versa.

The operator may also restrict the items included in the list in region 704 by entering
15 characters in one of fields 748 corresponding to identification number 726, name 728, classification 730, credit status 732, state 734, country 736, geographic region 738, type 740, country code 742, and parent name 744 and pressing retrieve button 750. For
20 example, the letters "RE" have been entered in the one of fields 748 corresponding to name 728. Accordingly, only counterparties with names beginning with the letters "RE" are included in the list. The number of counterparties that are in the list may be indicated by
25 row count field 752.

The operator may double click on any row in the list in order to activate interface 400 with that counterparty's information presented. The operator may also select a counterparty by clicking on a row so that
30 a highlight region 754 appears in the row, and then clear the counterparty's information from the list by clicking on clear button 756 or select to activate interface 400 with that counterparty's information presented by clicking on select button 758. The

operator may close interface 700 by clicking close button 760.

FIG. 8 illustrates select counterparty interface 800 with a parent tree view option 802 selected. Interface 800 may include three viewing windows 804, 806, and 808. In window 804, a parent tree view list may be presented. The list may include a list of counterparties, sub-counterparties of those counterparties, sub-sub-counterparties of the sub-counterparties, and so on. As illustrated, a plus sign 810 may be used to indicate a counterparty that has a sub-counterparty. In the case of "Republic Holdings", its sub-counterparty's identification number and name may be indicated by clicking on plus sign 810. Once this has been done, the plus sign may change to a minus sign 812 and the sub-counterparty's information may be indicated. In the case of "Ready Enterprises", its sub-counterparty is "Ready Trade". In the instance of counterparties where no sub-counterparty exists, these counterparties may be indicated without either a plus sign 810 or a minus sign 812 to indicate this status.

Once an operator has clicked on a counterparty in window 804, the sub-counterparties for that counterparty may also be listed in legal entity list window 806. At the same time, additional information for the clicked-on counterparty may be displayed in window 808. This additional information may include basic counterparty information 814, financial statement information 816, and parent information 818 (if applicable).

The operator may double click on any counterparty in the lists of windows 804 and 806 in order to activate interface 400 with that counterparty's information presented. The operator may

also select a counterparty by clicking on that counterparty in the lists of windows 804 and 806 and click on select button 820 in order to activate interface 400 with that counterparty's information presented. The operator may close interface 800 by clicking close button 822.

Referring back to FIG. 3, selecting basic information icon 303 from main menu 300 may present interface 400 with the information for the counterparty that was last displayed in the interface. As explained above, the operator may then view and edit the information displayed.

From main menu 300, an operator may also select to view, enter, and edit financial statements for the last selected counterparty by clicking on financial information icon button 304. In response, financial statements interface 900 may be presented as illustrated in FIG. 9. As shown, interface 900 may contain a statement list 902 and a statement detail 904 for a selected statement in list 902. By clicking on a statement 906 so that the statement becomes highlighted, a corresponding statement detail 904 may be presented.

In order to modify the contents of a financial statement 906, the operator may click modify button 910. As shown in FIG. 10, upon clicking button 910, interface 1000 may be presented. Through interface 1000, the operator may edit the values in fields 1002, view the previous statement details in region 1004 if available (none shown), set the status 1006 for the financial statement (e.g., audited or unaudited), set the currency 1008 for the financial statement, and set the date 1010 for the financial statement (although, preferably the date cannot be

altered once set). After the operator is satisfied with the settings in interface 1000, the operator may save the settings by clicking on save button 1012 and then close interface 1000 by clicking on close button
5 1014.

Similarly, from interface 900, an operator can create a new financial statement by clicking new button 912 and enter the pertinent information in interface 1000 of FIG. 10. By clicking on print button
10 914, an operator can print a financial statement. By clicking on save button 908, an operator can save one or more new financial statements or modifications to one or more financial statements. Finally, by clicking on close button 916, an operator can close interface
15 900.

If the operator clicks on note icon 306 from main menu 300, a note information interface 1100 may be presented as illustrated in FIG. 11. As shown, interface 1100 includes a note type list 1102 and a
20 notes area 1104. Note type list 1102 includes various types of notes that may be entered and displayed. Upon selecting a note type, such as note type 1110, notes area 1104 may display the corresponding notes 1108 for the selected type. Notes area 1104 may also present
25 author information 1106 for the note which may include a note identification number, an operator name, and a date and time the note was created or modified. In order to show notes for all note types in list 1102, the operator may click on show all box 1112.

30 To create a new note type for list 1102, the operator may click on create new type box 1114. Upon doing so, a dialog box may appear prompting the operator to enter a name for the new note type. Once entered, the note type will preferably appear in list

FIG. 10

1102. In order to delete a note type, the operator may select a note type in list 1102 and click on delete type button 1116. All notes related to that type may then be deleted, the user may be prompted whether each
5 note is to be deleted or converted to another note type, or all notes may be converted to another note type.

By clicking on new button 1122, an operator may create a new note of the type selected. By
10 clicking on delete button 1120, an operator may delete a selected note. By clicking on refresh button 1124, an operator can refresh the notes displayed in interface 1100. This may be particularly useful where more than one operator is entering notes for a given
15 counterparty. By clicking on save button 1118, an operator can save newly created notes and modifications to notes. Finally, by clicking on close button 1126, an operator can close interface 1100.

An operator may view credit limits for one or
20 more counterparty accounts by clicking on limit list icon 307 in main menu 300 of FIG. 3. As shown in FIG. 12, an interface 1200 may then be displayed. Interface 1200 may include a subcategory list 1202 showing various trading markets in the trading system and a
25 limit list 1204 showing credit limits for certain counterparty accounts. Subcategory list 1202 may be used to select trading markets in the trading system for which the operator would like to view trading limits in list 1204. As shown, all subcategories may
30 be selected in list 1202. This may be accomplished by selecting radio button 1208. To unselect all subcategories, the operator may select radio button 1210. The operator may also restrict the counterparties listed in list 1204 by entering a name

5 1204.

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A new account limit may be added to list 1302 by clicking on new button 1312, or an existing account limit may be modified by clicking on modify button 1311. After an operator clicks on button 1312 or 1311,

a limit entry interface 1400 may be presented as illustrated in FIG. 14. By selecting and modifying the various fields 1402, the operator may the set the account limits and other parameters to the desired settings. The operator may then save the new settings by clicking on save button 1404. The operator may close interface 1400 by clicking on close button 1406.

By clicking on button 1314, the operator may refresh the information displayed in interface 1300. By clicking on print button 1316, the operator may print out the information displayed in interface 1300. By clicking on export button, 1318, the operator may export the information displayed in interface 1300 to a data file. By clicking on save button 1310, the operator may save an changes or additions made to the limits or other parameters displayed in interface 1300. Finally, by clicking on close button 1320, the operator may close interface 1300.

Turning back to interface 1200 of FIG. 12, as illustrated, interface 1200 may also include a counterparty-without-limit list 1206 showing counterparties for which no limits have been set for the selected trading markets. These counterparties may not be eligible to trade in those trading markets because no limits have been set. Counterparty-without-limit list 1206 may be displayed by clicking on counterparty-without-limit box 1216.

By clicking on print button 1226, the operator may print out the information in interface 1200. By clicking on export button 1228, the operator may export the information in interface 1200 to a data file. By clicking on save button 1222, the operator may save any additions or modifications to the information displayed in interface 1200. Finally, by

clicking close button 1230, the operator may close interface 1200.

In order to view position versus limit information for one or more counterparties in one or more trading markets of the trading system, an operator may click on position versus limit icon 308 of main menu 300 of FIG. 3. Upon selecting icon 308, position versus limit interface 1500 of FIG. 15 may be displayed. Interface 1500 may include a list 1502 of trade information for each counterparty corresponding to a category and one or more subcategories selected in fields 1504 and 1506, respectively. By clicking on radio buttons 1508 and 1510 and then clicking on retrieve button 1512, the operator may respectively select and unselect all of the categories and subcategories in fields 1504 and 1506 and then view the results in list 1502. The values in list 1502 may then be updated either manually or automatically by selecting one of the radio buttons in refresh settings 1514.

As shown in interface 1500, list 1502 may include for each counterparty a counterparty identification number, a counterparty name, a limit type, a new limit type, a limit subcategory, whether the counterparty has been shut off, the percentage of the limit for initial warning, the quantity of trades executed, the LBE net position, the LBE net limit, and the percentage of the LBE net limit reached so far.

As with all position related interfaces and limit related interfaces, the information presented may be presented in white when the counterparty's accounts are in good standing, in yellow when the accounts are over their warning limits, and in red when the accounts are over their credit limit?

To view position versus limit information for all of a particular counterparty's accounts in a particular subcategory, an operator may select a set of counterparty accounts in the selected subcategory in list 1502 and then click on account button 1516. Upon clicking on account button 1516, position versus account detail interface 1600 may be presented as shown in FIG. 16. As illustrated, this interface may include a list of accounts 1602 for the selected counterparty and subcategory 1601. This list may indicate for each account the account number, the account name, the active status, the shut off status, the warning limit percentage, the quantity of trades so far, the LBE net position, the LBE net limit, the percentage of the LBE net limit, the LBE gross position, and the LBE gross limit. The operator may close interface 1600 by clicking on close button 1604.

To view position versus limit information for all transactions in a particular subcategory for a particular counterparty, an operator may select a set of counterparty accounts in the selected subcategory in list 1502 and then click on transaction button 1518. Upon clicking on transaction button 1518, position versus limit interface 1700 may be presented as shown in FIG. 17. As illustrated, this interface may include a list of transactions in a selected subcategory 1704 for a selected counterparty. For each transaction, this list may indicate particulars of the transaction including the quantity, the LBE, the principal, the price, and whether the transaction was a buy or sell. By clicking on close button 1706, the operator may close interface 1700.

Referring back to FIG. 15, once the operator is done using interface 1500, the operator may close the interface by clicking on close button 1520.

In order to view position information for the
5 current trading day, an operator may click on today's
position icon 309 from main menu 300 of FIG. 3. As
shown in FIG. 18, an interface 1800 may then be
presented. Upon selecting a category and one or more
subcategories in fields 1804 and 1806, the operator may
10 view a list of position information for each
counterparty participating in the trading markets
corresponding to the selected category and
subcategories. This information may include the
counterparty identification number, the counterparty
15 name, the subcategory, the quantity, LBE net position,
the LBE gross position, the LBE long position, the LBE
short position, etc. To view position information for
each of a counterparty's accounts in a selected
subcategory, an operator may select the desired
20 counterparty and category in list 1802 and click on
account button 1808. Upon clicking on button 1808 a
list 1902 showing the current trading day's position
information for the corresponding accounts may be
presented in an interface 1900. Each of interfaces
25 1800 and 1900 may be closed by pressing close buttons
1810 and 1904.

In order to view cumulative position
information, an operator may click on cumulative
position icon 310 from main menu 300 of FIG. 3. As
30 shown in FIG. 20, an interface 2000 may then be
presented. Upon selecting a category and one or more
subcategories in fields 2004 and 2006, the operator may
view a list of cumulative position information for each
counterparty participating in the trading markets

corresponding to the selected category and subcategories. This information may include the counterparty identification number, the counterparty name, the subcategory, the quantity, LBE net position, the LBE gross position, the LBE long position, the LBE short position, etc. To view cumulative position information for each of a counterparty's accounts in a selected subcategory, an operator may select the desired counterparty and category in list 2002 and click on account button 2008. Upon clicking on button 2008 a list 2102 showing the cumulative position information for the corresponding accounts may be presented in an interface 2100. Each of interfaces 2000 and 2100 may be closed by pressing close buttons 2010 and 2104.

Those skilled in the art will appreciate that the present invention can be practiced by other than the described embodiments, which are presented for purposes of illustration and not of limitation, and the present invention is limited only by the claims which follow.

2000 2002 2004 2006 2008 2010 2012 2014 2016 2018 2020 2022 2024 2026 2028 2030 2032 2034 2036 2038 2040 2042 2044 2046 2048 2050 2052 2054 2056 2058 2060 2062 2064 2066 2068 2070 2072 2074 2076 2078 2080 2082 2084 2086 2088 2090 2092 2094 2096 2098 2100 2102 2104 2106 2108 2110 2112 2114 2116 2118 2120 2122 2124 2126 2128 2130 2132 2134 2136 2138 2140 2142 2144 2146 2148 2150 2152 2154 2156 2158 2160 2162 2164 2166 2168 2170 2172 2174 2176 2178 2180 2182 2184 2186 2188 2190 2192 2194 2196 2198 2200 2202 2204 2206 2208 2210 2212 2214 2216 2218 2220 2222 2224 2226 2228 2230 2232 2234 2236 2238 2240 2242 2244 2246 2248 2250 2252 2254 2256 2258 2260 2262 2264 2266 2268 2270 2272 2274 2276 2278 2280 2282 2284 2286 2288 2290 2292 2294 2296 2298 2300 2302 2304 2306 2308 2310 2312 2314 2316 2318 2320 2322 2324 2326 2328 2330 2332 2334 2336 2338 2340 2342 2344 2346 2348 2350 2352 2354 2356 2358 2360 2362 2364 2366 2368 2370 2372 2374 2376 2378 2380 2382 2384 2386 2388 2390 2392 2394 2396 2398 2400 2402 2404 2406 2408 2410 2412 2414 2416 2418 2420 2422 2424 2426 2428 2430 2432 2434 2436 2438 2440 2442 2444 2446 2448 2450 2452 2454 2456 2458 2460 2462 2464 2466 2468 2470 2472 2474 2476 2478 2480 2482 2484 2486 2488 2490 2492 2494 2496 2498 2500 2502 2504 2506 2508 2510 2512 2514 2516 2518 2520 2522 2524 2526 2528 2530 2532 2534 2536 2538 2540 2542 2544 2546 2548 2550 2552 2554 2556 2558 2560 2562 2564 2566 2568 2570 2572 2574 2576 2578 2580 2582 2584 2586 2588 2590 2592 2594 2596 2598 2600 2602 2604 2606 2608 2610 2612 2614 2616 2618 2620 2622 2624 2626 2628 2630 2632 2634 2636 2638 2640 2642 2644 2646 2648 2650 2652 2654 2656 2658 2660 2662 2664 2666 2668 2670 2672 2674 2676 2678 2680 2682 2684 2686 2688 2690 2692 2694 2696 2698 2700 2702 2704 2706 2708 2710 2712 2714 2716 2718 2720 2722 2724 2726 2728 2730 2732 2734 2736 2738 2740 2742 2744 2746 2748 2750 2752 2754 2756 2758 2760 2762 2764 2766 2768 2770 2772 2774 2776 2778 2780 2782 2784 2786 2788 2790 2792 2794 2796 2798 2800 2802 2804 2806 2808 2810 2812 2814 2816 2818 2820 2822 2824 2826 2828 2830 2832 2834 2836 2838 2840 2842 2844 2846 2848 2850 2852 2854 2856 2858 2860 2862 2864 2866 2868 2870 2872 2874 2876 2878 2880 2882 2884 2886 2888 2890 2892 2894 2896 2898 2900 2902 2904 2906 2908 2910 2912 2914 2916 2918 2920 2922 2924 2926 2928 2930 2932 2934 2936 2938 2940 2942 2944 2946 2948 2950 2952 2954 2956 2958 2960 2962 2964 2966 2968 2970 2972 2974 2976 2978 2980 2982 2984 2986 2988 2990 2992 2994 2996 2998 3000